

CLAIMS

We claim:

1. A method for identifying proteins which function as intercellular signals between a signaling cell and affected cells, the method comprising the steps of
 inserting a cDNA library from the signaling cell into a phage ;
 incubating the phage with the affected cells;
 washing phage which does not bind to the affected cells;
 eluting the phage which does bind to the affected cells; and
 sequencing the cDNA inserts in the bound phage to identify sequence information useful
for characterizing a protein made by the signaling cell and recognized by a receptor in the
affected cells.

2. A method as claimed in claim 1 wherein the signaling cells are fibroblasts and the
affected cells are embryonic stem cells.

3. A method as claimed in claim 2 wherein the embryonic stem cells are human.

4. A method as claimed in claim 1 wherein there are multiple binding and washing steps
to enrich the proportion of bound phage to affected cells.

5. A method as claimed in claim 4 wherein there are two to four repetitions of the
binding and washing steps.

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6. A method for identifying proteins which function as intercellular signals between a fibroblast cell and embryonic stem cells cells, the method comprising the steps of
inserting a cDNA library from the fibroblast cell into phage to make a phage library;
incubating the phage library with the stem cells;
washing phage which does not bind to the stem cells;
repeating the incubating and washing steps as needed to enrich the proportion of bound phage to the stem cells;
eluting the phage which does bind to the stem cells; and
sequencing the cDNA inserts in the bound phage to derive sequence information identifying a protein made by the fibroblast and recognized by a receptor in the stem cells.